Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Wyaconda River

Waterbody Segment at a Glance:

County: Lewis
Nearby Cities: Wayland
Length of impairment: 8.0 miles
Pollutant: Manganese
Source: Natural source

TMDL Priority Ranking: Low

Description of the Problem

Beneficial uses of Wyaconda River

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life and Human Health associated with Fish Consumption
- Boating and Canoeing
- Drinking Water Supply

Use that is impaired

- Drinking Water Supply

Standards that apply

These are found in Missouri's Water Quality Standards in 10 CSR 20-7.031(4)(E) Taste- and Odor-Producing Substances:

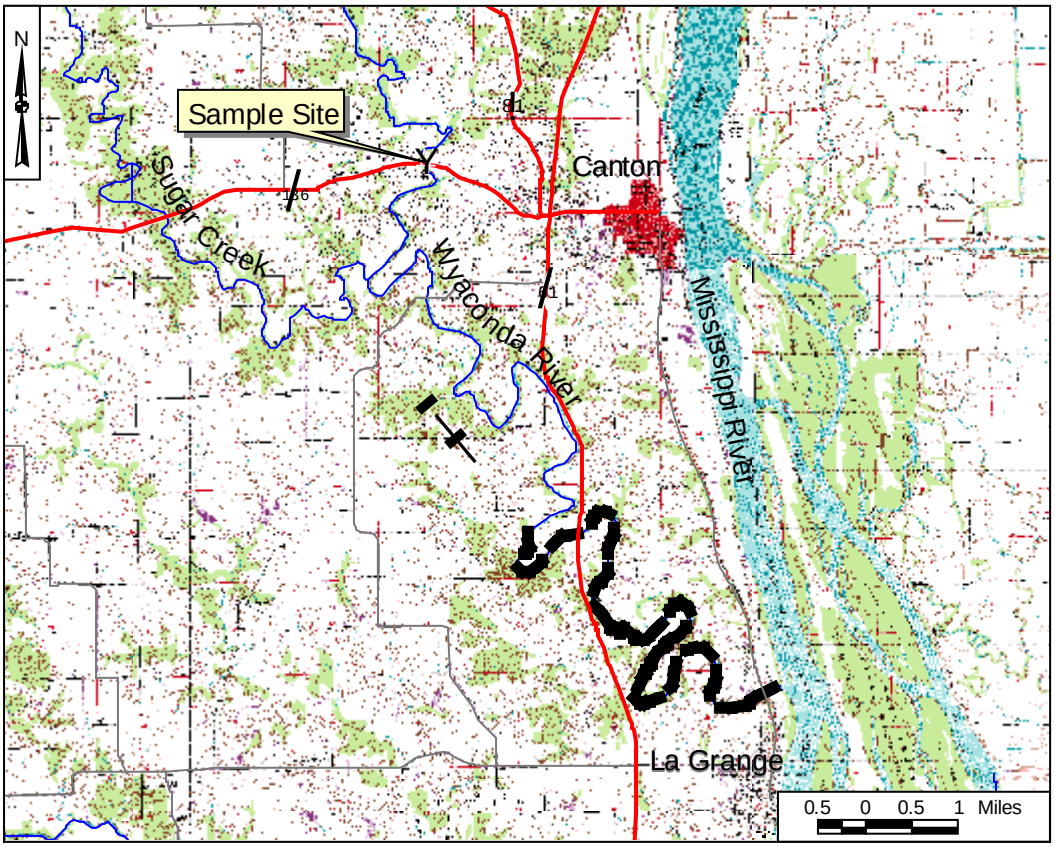
- For those streams and lakes designated for drinking water supply use, the taste- and odor-producing substances shall be limited to concentrations that will not interfere with the production of potable water by reasonable water treatment processes. Table A in the standards limits manganese in drinking water to 50 µg/L (micrograms per liter or parts per billion).

(This is an aesthetic standard that seeks to protect a water supply against possible taste, odor and laundry staining problems caused by excessive amounts of manganese. Exceedence of this standard is not a threat to human health.)

Monitoring of the Wyaconda River near Canton, Missouri during 2000 has shown an average level of dissolved manganese of 293 µg/l (based on 4 individual samples). There are no known significant man-made sources of manganese in this watershed. The source of the manganese is believed to be natural weathering and erosion of earth materials (soils and sub-soils) in this watershed. Several other streams in Northeastern Missouri also have elevated levels of dissolved manganese.

Manganese does not present any human health hazards, but is responsible for offensive tastes and appearances in drinking water, as well as staining laundry and fixtures. It can react with tannins in coffee, tea and in other beverages, producing a black sludge, which affects both taste and appearance. Manganese causes a brownish-black staining of laundry, porcelain, dishes, utensils and glassware. Soaps and detergents do not remove the stains, and use of chlorine bleach can intensify the stains. Manganese can build up in pipelines, pressure tanks, water heaters and water softeners and causes equipment problems and energy cost increases due to mineral deposits.

Wyaconda River in Lewis County, Missouri, with Sampling Site



Impaired segment → Direction of Flow

Manganese in Wyaconda River, 2000-2001

Date	Dissolved Manganese (µg/l)
3/21/2000	151
5/25/2000	307
8/31/2000	355
11/28/2000	358
3/8/2001	288
6/22/2001	5
9/10/2001	88.8

Source: Missouri Department of Natural Resources

For more information call or write:

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